

T COMMON HALF YEARLY EXAMINATION - 2024

Standard - XII

Reg.No.

		2	4	1	9
--	--	---	---	---	---

Time: 3.00 hrs.

BIOLOGY

Marks: 70

PART - I [BIO - BOTANY]

Marks : 35

Section - 1

8×1=8

Note: i) Answer all the questions.

ii) Choose the correct answer and write with choice option.

- In majority of plants pollen is liberated at
 - 1 cell stage
 - 2 cell stage
 - 3 cell stage
 - 4 cell stage
- Due to incomplete linkage in maize, the ratio of parental and recombinants are
 - 50:50
 - 7:1:1:7
 - 96.4 : 3.6
 - 1:7:7:1
- Solidifying agent used in plant tissue culture is
 - Nicotinic acid
 - Cobaltous chloride
 - EDTA
 - Agar
- Which of the given plant produces cardiac glycosides?
 - Calotropis
 - Acacia
 - Nepenthes
 - Utricularia
- Solar energy used by green plants for photosynthesis is only
 - 2-8%
 - 2-10%
 - 3-10%
 - 2-9%
- Depletion of which gas in the atmosphere can lead to an increased incidence of skin cancer.
 - Ammonia
 - Methane
 - Nitrous oxide
 - Ozone
- Dwarfing gene of wheat is
 - Pal-1
 - Atomita-1
 - Norin-10
 - Pelita-2
- Tectona grandis is coming under family
 - Lamiaceae
 - Fabaceae
 - Dipterocarpaceae
 - Ebenaceae

Section - 2

Note: Answer any four of the following questions.

4×2=8

- What is endothelium?
- Write the advantages of Bt cotton.
- What do you know about Cryopreservation?
- Define - Ecology.
- Write a note on heterosis.
- Vivipary germination - Describe.

Section - 3

Note: Answer any three of the following questions.

3×3=9

Question No. 19 is compulsory.

- List out the functions of tapetum.
- Write the effects of global warming.
- What are the main objectives of Plant Breeding?
- Enumerate the benefits of genetically modified foods.
- Give an account of the economic importance of Rice.

Section - 4

Note: Answer the following questions.

2×5=10

- Write the applications of Bio-technology.

(OR)

Give an account of application of plant tissue culture.

- Enumerate the advantages of Agro-forestry.

(OR)

How will you prepare an organic pesticide?

PART - II [BIO - ZOOLOGY]
Section - A

XII - Biology

Marks : 35

Note: i) Answer all the questions.
ii) Choose the most appropriate answer from the given four alternatives and write the option code and the corresponding answer. **8×1=8**

- 1) The most common substrate used in distilleries for the production of ethanol is _____.
a) Soyameal b) Groundgram c) Molasses d) Corn meal
- 2) Chlorine - resistant microorganisms are
a) Pseudomonas putida and E.Coli
b) Cryptosporidium and Giardia
c) Saccharomyces cerevisiae and Saccharomyces carlsbergensis
d) Aspergillus riger and Acetobacter aceti
- 3) Allergy involves
a) IgE b) IgG c) IgA d) IgM
- 4) Continuous breeding occurs in _____.
a) Lizards b) Deers c) Frogs d) Rabbit
- 5) Transgenic animals are those which have
a) Foreign DNA in some of their cells b) Foreign DNA in all their cells
c) Foreign RNA in some of their cells d) Foreign RNA in all their cells
- 6) Which of the following depicts Population Dispersion?
a) Natality, Mortality b) Amensalism, Commensalism
c) Hibernation, Aestivation d) Emigration, Immigration
- 7) Which one of the following is not coming under insitu conservation?
a) Sanctuaries b) Natural parks
c) Zoological park d) Biosphere reserve
- 8) What can be the blood group of offspring when both parents have AB blood group?
a) AB only b) A, B and AB c) A, B, AB and O d) A and B only

Section - B

Note: Answer any four questions.

4×2=8

- 9) What is Gene flow?
- 10) What is the composition of semen?
- 11) Name the Biodiversity Hotspots in India.
- 12) Differentiate Template strand and Coding strand.
- 13) What is Acclimatisation?
- 14) Expand the following: (a) ZIFT (b) ICSI

Section - C

Note: Answer any three questions.

3×3=9

Question Number 19 is compulsory.

- 15) Write notes on: (a) Eutrophication (b) Algal Bloom
- 16) Differentiate between Somatic cell gene therapy and Germline gene therapy.
- 17) Draw a labelled sketch of a spermatozoan.
- 18) Why tRNA is called an adapter molecule?
- 19) Name the genetic trait which is present only in men. Explain why females are not affected by this trait?

Section - D

Note: Answer all questions.

2×5=10

- 20) Define Radioactive waste. What are the methods of disposal of radioactive wastes? Explain the radioactive waste management.

(OR)

Give a detailed account of Natural method of Birth control.

- 21) List out the objections to Darwinism.

(OR)

Explain the different kinds of syngamy in organisms.
